

REMARKS

The Office Action mailed June 1, 2005 has been received and reviewed. Claims 21-40 are in the case. Claims 21-40 stand rejected under the judicially created doctrine of obviousness-type double patenting. Claims 36-40 stand rejected under 35 U.S.C. § 102(b). Claims 21-35 stand rejected under 35 U.S.C. § 103(a).

By this amendment, claims 21, 36, and 37 have been amended to further define the loading imposed on Applicant's biasing member. For the reasons set forth below, claims 21-40 are believed to be in condition for immediate allowance. Favorable reconsideration of the application in view of the following remarks, is therefore respectfully requested.

Rejection of Claims 36-40 Under 35 U.S.C. §102(b)

Claims 36-40 stand rejected under the judicially created doctrine of obviousness-type double patenting over selected claims within U.S. Patent Nos. 6,390,747 and 6,585,469.

Applicant has included herewith a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c). Accordingly, Applicant respectfully requests that the rejection of claims 36-40 under the judicially created doctrine of obviousness-type double patenting be withdrawn.

Rejection of Claims 36-40 Under 35 U.S.C. §102(b)

Claims 36-40 stand rejected under 35 U.S.C. §102(b) as being anticipated by Erikson (U.S. Patent No. Re. 31,713).

For a prior art reference to anticipate, every element of the claimed invention must be identically disclosed in a single prior art reference; and those elements must be arranged or connected together in a single reference in the same way as specified in the patent claim. With respect to newly amended claims 36-40, Erikson does not meet this test.

For example, claim 36 now recites a "coil spring loaded in torsion to urge at least one revolution of the slide with respect to the base in a direction selected to produce expansion in the axial direction" (emphasis added). Similarly, claims 37-40 now recite "a bias member urging the relative rotation," which comprises "at least one revolution."

In contrast, Erikson discloses a spring 26 that need only advance a spacer 28 sufficiently to "take up the gap $2\Delta x$ left by nut wear." (Erikson column 3, lines 30-31). As appreciated, the gap generated by "nut wear," illustrated in Figure 6, is necessarily small and typically on the order of thousands of an inch. Furthermore, "nut wear" is small when compared to the pitch of the threads between Erikson's retainer means 24 and spacer 28. Far less than one revolution of the spacer 28 with respect to the retainer means 24 will "take up the gap" left by "nut wear." Accordingly, Erikson cannot be properly construed to teach a spring loaded sufficiently to urge at least one revolution.

Moreover, the spring taught by Erikson is incapable of inducing one revolution of the spacer 28 with respect to the retainer means 24. As can be seen in Figures 1 and 8, the clearance between unloaded spring 26 and retainer means 24, over which the spring 26 is to fit, is very limited for several reasons (e.g., the dimension of the inner nut 14, the small outer envelope into which the entire assembly must fit, the lack of any need for greater clearance, and the like). Accordingly, the diameter of the retaining means 24 precludes the spring 26 from being loaded sufficiently to induce at least one revolution between the retaining means 24 and the spacer 28, as required by Applicant.

"As load is applied to a torsion spring, the spring diameter will decrease, reducing the outside and inside diameters." (*Torsion Spring Calculator and Formula*, Engineers Edge, www.engineersedge.com/spring_torsion_calc.htm, accessed August 1, 2005.) As a result, because torsion springs are normally designed around a shaft or mandrel to ensure spring

stability and location, one should “[a]llow for 10% clearance between the torsion spring and the shaft” when the torsion spring is at “maximum deflection.” *Id.* In Erikson, there is not even the recommended 10% clearance between the unloaded spring 26 and the retaining means 24, let alone after the spring 26 is loaded. Accordingly, the spring 26 of Erikson cannot be loaded sufficiently urge at least one revolution, as required by Applicant. Reconsideration is respectfully requested.

Rejection of Claims 21-24, 28-32, 34 and 35 Under 35 U.S.C. §103(a)

Claims 21-24, 28-32, 34 and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Reh (U.S. Patent No. 5,522,688) in view of Erikson.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (See MPEP 2143.) The combination of Reh and Erikson fails to meet this test because it fails to teach or suggest all of Applicant's claim limitations. Moreover, Reh teaches against the threads taught by Erikson, thereby precluding the requisite suggestion or motivation to combine.

With respect to claims 21-24, 28-32, 34 and 35, the combination of Reh and Erikson fails to teach or suggest a coil spring “loaded in torsion to urge at least one revolution of the slide with respect to the base,” as required by Applicant. As presented hereinabove, the limited clearance between the retainer means 24 and spring 26 of Erikson precludes the spring 26 from being loaded sufficiently to urge at least one revolution. Adding the teachings of Reh to those of

Erikson does not remedy this deficiency. Reh teaches a maximum relative rotation of "270 degrees." (Reh column 5, lines 45-48.) Accordingly, any rejection of claims 21-24, 28-32, 34 and 35 based on a combination of Reh and Erikson is improper and should not be maintained.

Moreover, the Office Action's attempt to apply the threads of Erikson to the device of Reh to provide multiple revolutions is improper, considering that Reh teaches against the threads used by Erikson. For example, Reh states that a take-up device "must be able to resist contraction, even under the high stress loadings which occur during earthquakes." (Reh column 3, lines 35-37.) To handle these "high stress loadings," Reh teaches thick helical ramps 34, 66, 68 with significant bearing surfaces. (Reh Figures 2-4 and 10.)

In contrast, Erikson teaches a "fine enough thread so as not to be contrarotated once advanced." (Erikson column 3, lines 32-34.) These fine threads of Erikson must only withstand "very little force." (Erikson column 3, lines 36-40.) Accordingly, the threads taught in Erikson are wholly inadequate to handle the "high stress loadings" imposed on the device of Reh. Moreover, Erikson, in specifically calling out threads fine enough to resist back rotation, thereby teaches that coarse threads (which might support larger loads) would be incapable of resisting back rotation when compressed. These teachings destroy any possible suggestion or motivation to apply the threads of Erikson to the device of Reh. Reconsideration is respectfully requested.

Rejection of Claims 25-27 and 33 Under 35 U.S.C. §103(a)

Claims 25-27 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Reh in view of Erikson and Simon (U.S. Patent No. 5,340,258).

As stated hereinabove, to establish a prima facie case of obviousness, three basic criteria must be met. (*See* MPEP 2143.) The combination of Reh, Erikson, and Simon fails to meet

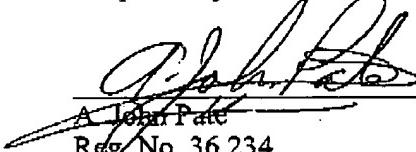
these basic criteria. Specifically, the combination fails to teach or suggest all of Applicant's claim limitations.

As presented hereinabove, the combination of Reh and Erikson Reh and Erikson fails to teach or suggest a coil spring "loaded in torsion to urge at least one revolution of the slide with respect to the base," as required by Applicant. Adding the teachings of Simon to those of Reh and Erikson does not remedy this deficiency. As appreciated, Simon does not even teach a spring, let alone a spring loaded to urge at least one revolution. Reconsideration is respectfully requested.

In view of the foregoing, Applicant respectfully requests reconsideration of claims 21-40. In the event that the examiner finds any remaining impediment to the prompt allowance of any of these claims, which could be clarified in a telephone conference, the examiner is respectfully urged to initiate the same with the undersigned.

DATED this 4th day of August, 2005.

Respectfully submitted,


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